

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

INTERNATIONAL BUSINESS MACHINES )  
CORPORATION, )

Plaintiff, )

v. )

THE PRICELINE GROUP INC., )  
KAYAK SOFTWARE CORPORATION, )  
OPENTABLE, INC., AND )  
PRICELINE.COM LLC )

Defendants. )

C.A. No. 15-137-LPS-CJB

**JURY TRIAL DEMANDED**

**IBM'S OPPOSITION TO DEFENDANTS' MOTION TO DISMISS**

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### **NATURE AND STAGE OF THE PROCEEDINGS**

On February 9, 2015, Plaintiff International Business Machines (“IBM”) filed its Complaint for Patent Infringement (“Complaint”) against Defendants The Priceline Group Inc., Kayak Software Corporation, OpenTable, Inc., and priceline.com LLC (collectively, “Priceline”) for infringement of United States Patent Nos. 5,796,967 (“the ’967 patent”), 7,072,849 (“the ’849 patent”), 5,961,601 (“the ’601 patent”), and 7,631,346 (“the ’346 patent”) (collectively, the “Patents-In-Suit”) (D.I. 1). On May 4, 2015, Priceline brought Defendants’ Motion To Dismiss, (D.I. 18 and 19), pursuant to 35 U.S.C. § 101.

### **SUMMARY OF THE ARGUMENT**

IBM is a pioneer in online computer systems, and each of the Patents-In-Suit was born out of IBM’s extensive investment in research and development. The Patents-In-Suit provide solutions to computer-centric problems, claiming inventions distinct from those known in the prior art. The ’346 Patent improves online user authentication via single-sign-on operations by allowing users to sign-on and access protected resources, even when they do not have preexisting user accounts. The ’601 Patent improves so-called stateless communication protocols by embedding state information into continuations, such as webpage links. The ’967 and ’849 Patents improve interactive applications by structuring applications as partitions comprised of modular objects that can be selectively stored and retrieved from the network as needed.

Attempting to portray those inventions as unpatentable under 35 U.S.C. § 101, Defendants ignore the problems addressed by the patents and the specific inventive solutions that the patents claim. For example, Defendants *never* address the “single-sign-on” limitation at the heart of the ’346 Patent. Nor do they analyze the critical “stateless communication protocol” limitation of the ’601 Patent. Likewise, Defendants reduce the claimed inventions of the ’967 and ’849 Patents to “local storage of information,” thereby eliminating any discussion of claim

language such as “objects,” “applications,” or “partitions.” And while Defendants offer flawed “brick and mortar” scenarios purportedly corresponding to the ’346 and ’601 Patents, they make no such attempt for the ’967 and ’849 Patents, effectively conceding that none exists. Moreover, Defendants only make a glancing reference to the many dependent claims, seeking their invalidity *en masse* without analysis. In sum, Defendants do not even approach their burden to show that every claim of the Patents-In-Suit is invalid under 35 U.S.C. § 101, especially at the motion to dismiss stage without the benefit of claim construction.

## **ARGUMENT**

### **I. Applicable Legal Standard**

#### **A. Motions To Dismiss For Lack Of Patentable Subject Matter**

“At the motion to dismiss stage a patent claim can be found directed towards patent ineligible subject matter if the *only* plausible reading of the patent must be that there is clear and convincing evidence of ineligibility.” *Tuxis Techs., LLC v. Amazon.com, Inc.*, C.A. No. 13-1771-RGA, 2014 WL 4382446, at \*2 (D. Del. Sept. 3, 2014) (hereinafter *Tuxis I*) (emphasis in original) (internal quotes omitted). Accordingly, “it will ordinarily be desirable—and often necessary—to resolve claim construction disputes prior to a § 101 analysis, for the determination of patent eligibility requires a full understanding of the basic character of the claimed subject matter.” *Bancorp Servs., LLC v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1273-74 (Fed. Cir. 2012)).

Defendants must present “clear and convincing evidence” to rebut the presumption of validity under 35 U.S.C. § 282. *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2251 (2011). While this Court has noted that the standard of proof for the purposes of §101 analysis may be “an unsettled question” of law, typically this Court either expressly applies the “clear and convincing” standard or invalidates patents only when there is “clear and convincing” evidence

of invalidity. *Intellectual Ventures I LLC v. Symantec Corp.*, C.A. No. 10-1067-LPS, 2015 WL 1843528, at \*5-6 (D. Del. Apr. 22, 2015).<sup>1</sup>

## **B. The Framework For A Section 101 Analysis**

Courts analyze validity under 35 U.S.C. § 101 pursuant to a two-step process (“*Alice* Step One” and “*Alice* Step Two”). *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014).

### **1. Step One: Is The Claim Directed To A Patent-Ineligible Concept?**

*Alice* Step One identifies the challenge addressed and the solution claimed to determine if a patent’s claims are directed to an abstract idea, such as a mathematical algorithm, or fundamental economic practice. *DDR Holdings, LLC v. Hotels.com, LP*, 773 F.3d 1245, 1257 (Fed Cir. 2014). If so, the analysis proceeds to *Alice* Step Two. If not, then the claims are valid under § 101. In asking this threshold question, courts must “tread carefully” to focus on the specific claimed solution rather than high-level simplifications because “[a]t some level, all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.”<sup>2</sup> *Alice*, 134 S. Ct. at 2354. (internal quotes omitted). Claims addressing “a problem specifically arising in the realm of computer networks” are patent eligible. *Intellectual*

<sup>1</sup> The case of *TriPlay Inc. v. WhatsApp Inc.*, C.A. No. 13-1703-LPS, D.I. 52, Slip Op., p. 8 (D. Del. Apr. 28, 2015), cited by Defendants, D.I. 19, at 3-4, does not dispute that the “clear and convincing” standard applies to factual disputes—including those central to patent-eligibility.

<sup>2</sup> Defendants cite *Morales v. Square, Inc.*, CV No. 5:13-cv-1092-DAE, 2014 WL 7396568, at \*6 (W.D. Tex. Dec. 30, 2014), “courts look past the claim language to ‘the purpose of the claim . . . ,’” to justify a wholesale departure from the claim language of the Patents-In-Suit. However, *Morales* turned on a finding that “[c]laim 6, *as drafted*, does not limit its data communication process to any particular application or use.” *Id.* at \*7 (emphasis added). Moreover, recent Federal Circuit decisions make certain to quote the challenged claim language before analyzing whether a claim is directed to an abstract idea. *See, e.g., Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 712 (Fed. Cir. 2014); *DDR Holdings*, 773 F.3d at 1258; *see also Ameranth, Inc. v. Genesis Gaming Solutions, Inc.*, No. SACV 11-00189 AG (RNBx), 2014 WL 7012391, at \*6 (C.D. Cal. Nov. 12, 2014) (“Defendants have not persuasively explained why all this [claim language] should be ignored when identifying the abstract idea to which the claim is directed.”).



*Ventures I*, 2015 WL 1843528 at \*18-\*21 (citing *DDR Holdings*, 773 F.3d at 1257). Similarly, the fact that the claims cannot be performed by a human alone is an important indication that they are patent-eligible. *Id.*; *Helios Software, LLC v. SpectorSoft Corp.*, C.A. No. 12-081-LPS, 2014 WL 4796111, at \*17 (D. Del. Sep. 25, 2014). “Ultimately, Defendants bear the burden of making clear the line between a patentable ‘process’ and an unpatentable ‘principle’ in the context of Plaintiff’s patent claims.” *Modern Telecom Sys. LLC v. Juno Online Servs., Inc.*, No. SA CV 14-0348-DOC (ANx), 2015 WL 1240182, at \*9 (C.D. Cal. Mar. 17, 2015) (internal quotes omitted). If Defendants do not meet that burden, the invalidity challenge fails and no further analysis is necessary. *Intellectual Ventures I*, 2015 WL 1843528, at \*22.

## **2. Step Two: Does The Claim Include An Inventive Concept?**

Claims directed to abstract ideas under *Alice* Step One may still be valid under *Alice* Step Two if they include an “inventive concept,” in other words, “an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.” *Alice*, 134 S. Ct. at 2355 (internal quotes omitted). Accordingly, claims that specify *how* interactions between computers may be manipulated in a way that overrides routine and conventional computer activity include an inventive concept. *DDR Holdings*, 773 F.3d at 1258; *Messaging Gateway Solutions, LLC v. Amdocs, Inc.*, C.A. No. 14-732-RGA, 2015 WL 1744343, at \*5 (D. Del. Apr. 15, 2015); *Intellectual Ventures I*, 2015 WL 1843528, at \*21. Likewise, claims where a machine “play[s] a significant part in permitting the claimed method to be performed, rather than function[ing] solely as an obvious mechanism” include an “inventive concept.” *Intellectual Ventures I*, 2015 WL 1843528, at \*21-\*22; *see also Helios*, 2014 WL 4796111, at \*17.

The so-called “machine-or-transformation test” is a useful and important clue about whether claims satisfy *Alice* Step Two. *DDR Holdings*, 773 F.3d at 1255-56. A claim can meet

the machine prong if “the specification . . . recites a specific machine configured in a specific way to implement [the] claim.” *Intellectual Ventures I*, 2015 WL 1843528, at \*21. A claim can meet the transformation prong “even though the method does not result in the physical transformation of matter,” if, for example, it “utilizes a system for modifying data that may have a concrete effect in the field of electronic communications.”<sup>3</sup> *Card Verification Solutions, LLC v. Citigroup Inc.*, No. 13 C 6339, 2014 WL 4922524, at \*5 (N.D. Ill. Sept. 29, 2014).

*Alice* Step Two also focuses on whether the patent “would effectively grant a monopoly over an abstract idea.” *Alice*, 134 S. Ct. at 2354. Because all patents grant a monopoly over the claimed subject matter, the inquiry is whether the claims “*disproportionately* tie up the use of the [patent’s] underlying ideas.” *Intellectual Ventures I*, 2015 WL 1843528, at \*17 (citing *Alice*, 134 S. Ct. at 2354) (internal quotes omitted) (emphasis in original). Where claims are limited to a specific way of carrying out an abstract idea, they allow for other unclaimed mechanisms and do not raise preemption concerns. See, e.g., *Diamond v. Diehr*, 450 U.S. 175, 191-192 (1981).

## **II. The Claims Of The ’346 Patent Are Not Invalid Under 35 U.S.C. § 101**

### **A. The ’346 Patent Claims Are Not Directed To An Abstract Idea (*Alice* Step One)**

Online service providers, like website operators, typically use “sign-on” operations to manage access to protected resources, like confidential webpages. ’346 Patent, D.I. 1, Exhibit 4 at 6:26-30. A user signs-on by providing authentication credentials, such as a username and password, which the service provider verifies to authenticate the user’s identity. *Id.* at 6:31-36. Then, the service provider can determine whether the identified user has authorization to access

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<sup>3</sup> Defendants quote *Ultramercial* for the proposition that “[a]ny transformation from the use of computers or the transfer of content between computers is merely what computers do and does not change the analysis.” D.I. 19 at 6 (citing *Ultramercial*, 772 F.3d at 717). However, Defendants’ use of that quotation out of context is misleading because in *Ultramercial* the Court was discussing a specific patent, not limiting the scope of the machine-or-transformation test.

the protected resource and, if so, grants access. *Id.* at 6:37-43, Fig. 1C. Although that process has become commonplace, it is time consuming for users to sign-on every time they wish to access a protected resource. *Id.* at 1:25-33. One way to address the shortcomings of repetitive sign-on operations is to authenticate users for an entire “session,” *i.e.*, a series of multiple transfers of information between the server and the client. ’346 Patent, at 1:53-61. That technology is called *single*-sign-on because users are only required to sign-on once per session. *Id.* For example, users could enter a user name and password on the homepage of a service provider and request multiple protected webpages without reentering their credentials. But prior art single-sign-on methods were problematic because they required users to have preexisting user accounts at the service provider. *Id.* at 2:19-42.

The ’346 Patent solves this computer-specific problem by dynamically creating user-accounts as part of single-sign-on authentication operations. Exhibit A depicts prior art single-sign-on operations, which required the user to have a preexisting account at a service provider. *Id.* at 2:26-30. Exhibit B is a dataflow diagram that depicts how the patent leverages interactions between two separate systems, a service provider and an identity provider, to authenticate the client, even if that client does not have a preexisting account. *Id.* at 33:44-58. Other embodiments of dynamically creating users accounts are depicted in Figs. 9A, 9B-9E, and 11A-D of the ’346 Patent. Exhibit C is a flow diagram that depicts decisions made by the service provider to implement single-sign-on. *Id.* at 37:48-55. Key steps from Exhibit C, such as “triggering a single-sign-on operation,” *see* step 1002, “receiving . . . an identifier associated with the user,” *see* steps 1004 and 1014, and “creating a user account for the user . . . based at least in part on the received identifier,” *see* step 1016, are recited in claim 1:

1. A method for managing user authentication within a distributed data processing system, wherein a first system and a second system interact *within a federated*

*computing environment* and support *single-sign-on operations* in order to provide access to protected resources, **at least one of the first system and the second system** comprising a processor, the method comprising;

*triggering a single-sign-on operation on behalf of the user in order to obtain access to a protected resource that is hosted by the second system*, wherein the second system requires a user account for the user to complete the *single-sign-on* operation prior to providing access to the protected resource;

receiving from the first system at the second system *an identifier associated with the user*; and

*creating a user account for the user at the second system based at least in part on the received identifier associated with the user after triggering the single-sign-on operation but before generating at the second system a response for accessing the protected resource*, wherein the created user account supports *single-sign-on* operations between the first system and the second system on behalf of the user.

'346 patent, claim 1, 44:38-61 (emphasis added). The '346 patent thus is not abstract; instead, it uses dynamic account creation to solve a deficiency in prior art single-sign-on implementations, which was "'a problem specifically arising in the realm of computer networks' and computers." *Intellectual Ventures I*, 2015 WL 1843528 at \*18 (citing *DDR Holdings*, 773 F.3d at 1257).

Defendants ignore the limitations of claim 1 of the '346 Patent when applying *Alice* Step One. For example, Defendants *never* address the single-sign-on limitation, despite the fact that it appears five times in the claim. Defendants' mischaracterization of the '346 Patent as directed simply to "access rights," see D.I. 19, at 6, encompasses the prior art, including traditional sign-on operations, previously known single-sign-on operations, and operations that do not rely on sign-on to obtain access (e.g. a direct link). Rather than identifying the particular "challenge addressed," see *DDR Holdings*, 773 F.3d at 1257, or focusing on the actual '346 claim language, Defendants resort to hand-waving about general technologies.

Defendants compare this case to *Intellectual Ventures I*, 2015 WL 1843528, because they allegedly both involve "identifying characteristics" and to *Bascom Research, LLC v. LinkedIn*,

*Inc.*, Case No. 12-cv-06293-SI, 2015 WL 149480 (N.D. Cal. Jan. 5, 2015), because they allegedly both involve “relationships” between two things. D.I. 19 at 8-9. But *Intellectual Ventures I*, 2015 WL 1843528 also demonstrates that the few superficial commonalities between the claims at issue in those cases and the ’346 Patent claims are irrelevant. While it is true that in *Intellectual Ventures I*, this Court invalidated claims that were directed *solely* to generic computer concepts, this Court also rejected the defendants’ assertion that the patent in that case was directed to generic computer functionality mentioned in the claims, such as “data” or “information,” because the claims also “specifically recite[d] a *computer virus*, which has computer-centric implications that cannot be abstracted away so broadly.” *Id.* at \*19 (emphasis in original). Here, the claims likewise “specifically recite” computer-centric limitations that cannot be abstracted away—“single-sign-on” using at least two separate “systems” interacting in a “federated computer environment”<sup>4</sup>—and thus are valid because they meet *Alice* Step One.

#### **B. Defendants’ Flawed Brick And Mortar Scenario**

Defendants’ flawed “Sister Store” scenario demonstrates that the ’346 Patent is not abstract under *Alice* Step One. D.I. 19 at 10. Defendants fail to associate the “triggering a single-sign-on operation” limitation with any particular aspect of the “Sister Store” operation. D.I. 19 at 10. Even assuming Defendants intended to refer to “Jane Clerk begins to create a membership,” that association would conflate the “triggering a single-sign-on operation” claim language with the “creating a user account” claim language. The two limitations are distinct operations, are directed to different aspects of the invention, and appear in separate limitations of the claim. *See, e.g.*, ’346 Patent, 44:38-61. Defendants’ flawed scenario creates a gaping

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<sup>4</sup> The preamble, which includes the “federated computing environment,” is a claim limitation because it forms the antecedent bases for several terms, such as “the first system,” “the second system,” and “the user.” *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002).

security vulnerability by failing to authenticate Joe Shopper using a single-sign-on operation. The subsequent steps in Defendants' analogy, where "Jane Clerk receives . . . a list of all the grocery store's members" does nothing to verify that Joe Shopper is who he says he is, which is the entire purpose of authentication. '346 Patent, at 6:26-31.

Defendants cannot identify a brick-and-mortar analogy for single-sign-on because it is an issue "specifically arising in the realm of computer networks and computers." For example, single-sign-on allows a user to "sign-on" and obtain access for the duration of a user session. '346 Patent, at 1:55-61, 2:15-18. Defendants' scenario does not address user sessions because instead of authenticating via sign-on, it finds the existence of a name on a store membership list sufficient to confer access privileges. Moreover, sign-on operations must support a mechanism for authenticating a user who is not physically present because, as recited in the claims, the computers are communicating over a network in a federated computing environment.<sup>5</sup> '346 Patent, at 11:28-35. That is why online transactions, unlike brick-and-mortar transactions, require a shared secret that can be verified remotely, like a password. Defendants' scenario does not address authentication at all, much less authentication that could occur remotely. Furthermore, sign-on technology must contend with the possibility that users might try to directly access a protected resource by typing in a website address without first asking permission,<sup>6</sup> whereas a brick and mortar store can be confident that the user, like the flawed Joe Shopper, will pass through a common location like a store entrance or checkout counter. Defendants' flawed brick-and-mortar scenario does not correspond to the actual claims of '346 Patent and demonstrates why those claims are directed to patent-eligible subject matter.

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<sup>5</sup> Although the preamble of the '346 Patent is limiting, *see supra* note 4, Defendants ignore the entire limitation, including the "federated computing environment" term.

<sup>6</sup> The '346 Patent explains that a "protected resource" can be located at a URL, *i.e.* a webpage address. '346 Patent, at 5:64-67.

*Intellectual Ventures I*, 2015 WL 1843528 at \*21.

**C. The '346 Patent Claims Inventive Concepts (*Alice* Step Two)**

The '346 Patent claims inventive concepts under *Alice* Step Two, which independently precludes a finding of patent-ineligibility. The claimed elements must be considered both individually and as “an ordered combination” to evaluate whether they include an “inventive concept.” *DDR Holdings*, 773 F.3d at 1255. The “ordered combination” of steps is especially important here because the claims specify: “creating a user account for the user at the second system ***based at least in part on*** the received identifier associated with the user ***after*** triggering the single-sign-on operation but ***before*** generating at the second system a response for accessing the protected resource.” '346 Patent, at 44:54-58. The identity and order of those steps is crucial to modify the typical, prior art single-sign-on interactions and implement the process depicted in Exhibit C. '346 Patent, at 33:9-19. Those improvements to single-sign-on technology both individually and as an ordered combination constitute inventive concepts by providing a novel way of protecting digital content. *See Smartflash, LLC v. Apple Inc.*, Case No. 6:13cv447-JRG-KNM, 2015 WL 661174, at \*9 (E.D. Tex. Feb. 13, 2015).

Defendants argue that the use of “conventional computer technology,” such as personal computers, web servers, and browsers, demonstrates that the claims do not meet the machine-or-transformation test. But this Court has rejected that argument. *Messaging Gateway*, 2015 WL 1744343, at \*4-5 (rejecting arguments that the use of terms like “computer system” and “Internet server” rendered the claims invalid). Rather if computers “play a significant part in permitting the claimed method to be performed,” the claims are patent-eligible. *SiRF Tech., Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010). Here, the coordination between the specifically programmed first system, such as an identity provider, and the specifically programmed second system, such as a service provider, within a federated computing

environment, for the benefit of the user, is “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” and constitutes an inventive concept under *Alice* Step Two. *Intellectual Ventures I*, 2015 WL 1843528, at \*21 (finding that the coordination between three computers to detect viruses was patent eligible) (internal quotes omitted).

Finally, Defendants assert that the ’346 patent “seeks to monopolize every concrete application of using access rights to a first system to obtain access rights to a second system.” D.I. 19 at 12. To the contrary, as explained above, the ’346 Patent claims do not cover “every concrete application of using access rights” because they are specific to sign-on technology, a subset of using access rights. And the specification gives several examples of sign-on approaches in the prior art that are not preempted. These include completing a sign-on operation every time a user wishes to access a resource, ’346 Patent, at 1:47-52, providing single-sign-on capabilities on an enterprise-by-enterprise basis, *id.* at 1:25-37, and using a priori user account creation. *Id.* at 2:30-35.

**D. Defendants Have Not Shown That Claim 1 Is Representative Nor That This Motion Can Be Decided Before Claim Construction**

Defendants have not met their burden to show that claim 1 of the ’346 Patent is representative. For example, claims 3 and 4 relate to different mechanisms of acquiring information from online systems: push and pull operations. The specification explains:

A push-type single-sign-on request originates with an identity provider and is pushed to a service provider in an unsolicited manner in order to provide the service provider with information that authenticates a user identity; in contrast, a pull-type single-sign-on request originates with a service provider that is attempting to pull authentication information for a user in a solicited manner.

’346 Patent, at 31:40-47. The difference between push and pull mechanisms is significant, as is apparent by comparing dataflow diagrams 9A-E (push) and 11A-D (pull). Push and pull



mechanisms are computer-centric concepts and provide additional support for the patent-eligibility of claims 3 and 4. Defendants simply summarily dismiss them (and ten other claims) with no analysis of their limitations. D.I. 19, at 8 n.3.

Furthermore, construction of the claim terms of the '346 Patent is essential to "full[y] understanding [] the basic character of the claimed subject matter" and thus Defendants' motion is premature. *Fairfield Indus., Inc. v. Wireless Seismic, Inc.*, Civil Action No. 4:14-CV-2972, 2014 WL 7342525, at \*3 (S.D. Tex. Dec. 23, 2014). For example, reasonable constructions of the terms "single-sign-on," "authentication," "protected resource," "federated computing environment," "push authentication information," and "pull authentication information" (*see* potential constructions of these terms attached as Exhibit K), show very clearly that these claims are drawn to "computer-centric technology."

### **III. The Claims Of The '601 Patent Are Not Invalid Under 35 U.S.C. § 101**

#### **A. The '601 Patent Claims Are Not Directed To An Abstract Idea (*Alice* Step One)**

Network protocols provide standard mechanisms for computers to communicate with each other by specifying how data should be formatted for receipt and transmission between, for example, clients and servers. '601 Patent, D.I. 1, Ex. 3, at 3:15-18. Some network protocols are stateless, meaning that every communication between a client and a server is treated independently. *Id.* at 3:66-4:1. A common stateless protocol is the HyperText Transfer Protocol ("HTTP"), which is used to communicate between users and website servers. *Id.* at 2:25-29. Websites using HTTP format webpage documents with the HyperText Markup Language ("HTML"). *Id.* at 4:45-59. Webpages contain "continuations" in the form of clickable links that allow users to *continue* their interaction with the server by requesting new webpages. For example, Exhibit D depicts a webpage and Exhibit E depicts the underlying HTML code.

Exhibit E shows the continuations in yellow, which makes the blue highlighted text into links.

One problem with stateless protocols, such as HTTP, is that there is no built-in mechanism to keep track of the state of an ongoing series of communications—the “conversation”—between a client and server. *Id.* at 7:3-7, 32-40. Thus, a server handling business transactions using HTTP would be unable to effectively process orders because there is no way to update customer orders over the course of a conversation. *Id.* at 7:41-48. In the prior art, computers kept track of state information in small files stored at the client computer called “cookies.” *Id.* at 8:66-9:10. However, cookies were cumbersome to maintain, made it difficult to keep track of multiple conversations on the same computer, and were not compatible with all clients and servers. *Id.* at 9:11-27. The ‘601 Patent discloses and claims a specific alternative to prior art cookies: recursively embedding the state information in continuations, such as webpage links, during a conversation. *Id.* at 17:66-18:23. Claim 1 of the ‘601 Patent provides:

1. A computerized method for ***preserving state information in a conversation between a client adapted to request services from one or more servers which are networked via a stateless protocol*** to the client, said services including one or more of data and programs which the client may request, wherein the conversation is a sequence of communications between the client and one or more servers for said services wherein each response from the server includes one or more continuations which enable another request for said services and wherein the client must invoke one of the continuations to continue the conversation, the method comprising the steps of:

the client initiating the ***conversation with the server using the stateless protocol***;

detecting when the request for a service requires preservation of the state information;

performing said service and ***identifying all continuations in an output from said service***, in response to said step of detecting;

***recursively embedding the state information in all identified continuations***; and

communicating the output to the client, in response to said step of embedding; ***wherein the state information is preserved and provided to all services for the duration of the conversation.***

*Id.* (emphasis added). Just like *DDR Holdings*, “the claims at issue here specify how interactions with the Internet are manipulated to yield a desired result—**a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink**” and are therefore directed to a patent-eligible idea. *DDR Holdings*, 773 F.3d at 1258 (emphasis added).

Defendants allege that the ’601 Patent is directed to the supposedly abstract idea of “keeping track of prior communications during a conversation between computers.” D.I. 19 at 14. Defendants’ over simplification glosses over important differences between the claimed inventions and alternative mechanisms, such as state-aware protocols and cookies stored at the client computer. ’601 Patent, at 8:53-9:10. Although Defendants grossly oversimplify the subject matter of the ’601 Patent, even their formulation admits that the ’601 Patent is directed to communication **between computers**, D.I. 19, at 14, and therefore is patent eligible under *Alice* Step One by solving “a problem specifically arising in the realm of computer networks and computers.” *Intellectual Ventures I*, 2015 WL 1843528 at \*18-\*19 (internal quotes omitted).

Defendants compare this case to *Tuxis I* and *Ultramercial* because the patents at issue in those cases, at some level, involved “keeping track” of information. D.I. 19 at 15-16. But as Defendants admit, those patents were unconcerned with **how** to keep track of information and were instead directed to using computers to implement an abstract idea. *Id.* In *Tuxis I*, the patentee conceded that its patent was directed to the abstract idea of upselling. 2014 WL 4382446, at \*3. And in *Ultramercial*, the patent was directed to the abstract idea of using advertisements as currency. 772 F.3d at 715. Here, in contrast, the ’601 Patent is directed to a discrete solution to the computer-specific problem of using stateless communication protocols that—pursuant to routine and conventional techniques at the time of invention—did not inherently support keeping track of state information. The ’601 Patent solved this problem with

the specific solution of embedding state information in continuations, such as hyperlinks, and therefore is valid under *Alice* Step One.

## **B. Defendants’ Flawed Brick And Mortar Scenario**

Defendants’ flawed “Telephone Order” scenario, D.I. 19 at 17-18, demonstrates that the ’601 Patent claims are rooted in computer technology.<sup>7</sup> First, contrary to Defendant’s contention, “using the telephone” is not equivalent to using a “stateless protocol.” During telephone conversations, the customer and the merchant naturally use their memory to remember the “state” of their conversation—*i.e.* what the other person said earlier in the conversation. During computer communications using stateless protocols, no such mechanism exists. Every single instance of communicating back and forth is treated independently, without memory of earlier communications in the conversation. ’601 Patent, at 3:66-4:9. Just like in *DDR Holdings*, the proposed scenario is unpersuasive because it “did not have to account for the ephemeral nature of [the] Internet” and therefore improperly focuses on “a problem that does not arise in the brick and mortar context.” *DDR Holdings*, 773 F.3d at 1258.

In addition, Defendants are unable to identify a “corresponding routine step” for a key inventive aspect of the ’601 Patent: “recursively embedding the state information in *all* identified continuations.” Defendants associate writing down information about the order with “recursively embedding the state information” and asking questions about the order with “continuations.” D.I. 19 at 17-18. Those associations, read in light of the claim element, “recursively embedding the state information *in all identified* continuations,” causes Defendant’s analogy to fail since the written information (the alleged state) is never embedded in *any* of the

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<sup>7</sup> Defendants once again ignore the preamble. It is Defendants’ burden to address all plausible interpretations of the patent. *Tuxis I*, 2014 WL 438446, at \*2. Here, as with the ’346 Patent, because the preamble provides the antecedent basis for several claim terms, it is a claim limitation. *Catalina Mktg.*, 289 F.3d at 808. Accordingly, Defendants’ scenario should be rejected.

questions (the alleged continuations), much less in *all* of them. The claimed process of embedding separate instances of the state information into each continuation only makes sense in the computer world because the user does not see the HTML code underlying a webpage (which would look like repetitive gibberish, *see* Exhibit F). '601 Patent, at 4:62-67; 5:63-66. In fact, Defendants' scenario is more analogous to the prior art cookie technology, which stored state information in separate files for each customer. '601 Patent, at 8:66-9:10. The '601 Patent moved away from that approach. Once again, Defendants' failure to identify a persuasive scenario indicates that the claims are direct to patent-eligible subject matter. *Intellectual Ventures I*, 2015 WL 1843528 at \*21.

### **C. The '601 Patent Claims Inventive Concepts (*Alice* Step Two)**

The '601 Patent claims include inventive concepts under *Alice* Step Two, which independently precludes a finding of patent-ineligibility. Embedding state information in continuations is an inventive concept because it involves a specific way of transforming online communications. For example, the '601 Patent claims novel methods of preserving state information by transforming prior art webpages, like the one depicted in Exhibit D, that have underlying HTML code, depicted in Exhibit E. One embodiment specific to webpages, transforms HTML code by embedding state information into the hyperlinks, as depicted in Exhibit F. *See also* '601 Patent, at 14:30-46. The embedding process, depicted in Exhibit G, transforms each hyperlink to include reference to a converter program, shown in purple, and state variables, shown in green. *See also id.* After the transformation is complete, the webpage still looks like Exhibit D, *id.* at 4:62-67; 5:63-66, but the HTML code underlying the webpage will preserve state information. *Id.* at 16:1-4.

The claims here are similar to those in *Messaging Gateway*, 2015 WL 1744343. There, the claims at issue recited "inserting at least a message body of the text message into an Internet

Protocol (IP) message.” *Id.* \*3. This Court found that “[t]he claimed method manipulates [the] interaction [between devices] by translating the message in a way that allows the computer to receive and understand the message.” *Id.* at \*5. Accordingly, this Court found that the claims contained an “inventive concept” and were patent-eligible under *Alice* Step Two. The ’601 Patent also manipulate the interaction between two devices by translating the message to allow the computer to receive and understand the message. *Id.* In fact, the claims here are even more concrete because they describe a specific way of inserting information: identifying specific portions of the communication (continuations) and embedding specific data that improves the functionality of online communications (state information).

The ’601 Patent also meets the machine-or-transformation test by transforming electronic HTML pages in a way that has “a concrete effect in the field of electronic communications.” *Card Verification*, 2014 WL 4922524, at \*5. Indeed, the inventive concept of the ’601 Patent is precisely to transform stateless communications between a client and a server to state-aware communications by embedding state information. The exemplary formula for the transformation is depicted in Exhibit G, which transforms the HTML code depicted in Exhibit E into the HTML code depicted in Exhibit F. *See also* ’601 Patent, at 14:30-15:67.

Defendants assert that claim 1 of the ’601 patent would “monopolize every concrete application of keeping track of prior communications.” D.I. 19 at 19. But the specification provides several examples of different mechanisms for maintaining state information. First, clients and servers could simply use state-aware protocols, such as TCP/IP, which have a built-in mechanism to keep track of conversations. ’601 Patent, at 1:38-41. Second, clients and server could use cookies, which are small files containing state information stored at the client computer. *Id.* at 8:66-9:10. Finally, the clients and servers could communicate using HTML

forms. *Id.* 8:20-33 (describing Fig. 3). Thus, the '601 Patent was a particular new solution different from those already being practiced in the prior art.

**D. Defendants Have Not Shown That Claim 1 Is Representative Nor That This Motion Can Be Decided Before Claim Construction**

Defendants have not met their burden to show that claim 1 of the '601 Patent is representative. For example, claim 8 describes specific implementation details about how to implement embedding using a particular type of communication protocol (HTTP), a particular type of document (HTML), and a particular type of program (CGI).

8. The method of claim 1, wherein the client and the server are networked via the *World Wide Web*, the stateless protocol is *hypertext transfer protocol*, and the continuations are *hyperlinks* to one of *hypertext markup language files* and *common gateway interface programs*.

'601 Patent, claim 8 at 18:53-57 (emphasis added). And claim 13 recites additional elements that specify that state information can be embedded via instructions to invoke a CGI program with specific arguments:

13. The method of claim 8, wherein said step of embedding further comprises the step of: modifying an identified continuation which is an invocation to a CGI program to *invoke a CGI converter program* with the identified continuation, *an argument counter* which indicates a number of arguments associated with the CGI program, and the *state information passed as arguments*, wherein said step of embedding is performed by the converter program.

'601 Patent, claim 13 at 19:10-18 (emphasis added). Claims 8 and 13 are especially relevant to *Alice* Step One because they show specific use of a computer in a non-conventional way, amounting to an inventive concept. Defendants dismiss claims 8 and 13 along with dozens of other claims because they recite "Internet limitations." D.I. 20, at 30, n.10 (citing *Ultramercial*, 772 F.3d at 716). Contrary to Defendants' implication, *Ultramercial* does not hold that internet-related claims are *per se* patent-ineligible. *Id.*; see also *DDR Holdings*, 773 F.3d at 1258 ("Unlike the claims in *Ultramercial*, the claims at issue here specify how interactions with the

Internet are manipulated to yield a desired result.”).

Finally, as was the case with the ’346 Patent, construction of the claim terms of the ’601 Patent is essential to a “full understanding of the basic character of the claimed subject matter” and thus Defendants’ motion is premature. *Fairfield*, 2014 WL 7342525, at \*3. For example, reasonable constructions of the terms “recursively embedding the state information in all identified continuations,” “continuation,” “conversation,” “stateless protocol,” “HTTP,” “HTML,” and “CGI program” (see potential constructions, Exhibit K), show very clearly the “computer centric” nature of both the challenge that the patent is addressing (arising from “stateless protocols”) and the claimed solution (“recursively embedding” in “continuations”).

#### **IV. The Claims Of The ’967 And ’849 Patents Are Not Invalid Under 35 U.S.C. § 101**

##### **A. The ’967 And ’849 Patent Claims Are Not Directed To An Abstract Idea (Alice Step One)**

The ’967 and ’849 Patents (“the Filepp Patents”) were conceived in the 1980s, when IBM was developing the PRODIGY online service, a precursor to webpages on the world wide web,<sup>8</sup> which quickly grew to become one of the most popular providers of interactive applications. Exhibit L, ’967 Prosecution History, November 4, 1994 Disclosure Statement Under 37 C.F.R. 1.97 (describing the conception of the Filepp Patents); *see also* D.I. 1 ¶ 17, 19. Interactive applications existed in the prior art but they used a “dumb terminal” approach, which relied exclusively on the processing power of host systems that sequentially received user data process requests, executed them, and supplied responses back to the user. Exhibit L at 1-2; *see also* D.I. 1 ¶ 17; ’967 Patent, at 1:37-45; ’849 Patent, at 1:34-42. That process, depicted in Exhibit H, was computationally expensive for the host system because it was responsible for modifying and assembling the applications after every user interaction. Exhibit L, at 2; ’967 Patent, at 1:37-45,

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<sup>8</sup> The World Wide Web was invented in 1989. *See* Tony Johnson, *Spinning the World-Wide Web*, 24 BEAM LINE 2, 5 (Fall 1994), attached as Exhibit N.



10:37-41; '849 Patent, at 1:34-42, 10:42-45.

As interactive applications became more popular, the increasing number of users caused bottlenecks at the host systems. Exhibit L, at 2; D.I. 1 ¶ 17; *see also* '967 Patent, at 1:46-55, 10:41-53; '849 Patent, at 1:43-52, 10:45-57. Increasing the size and complexity of the host computer facilities was not always successful in reducing response times while keeping costs low. Exhibit L, at 2; D.I. 1 ¶ 17; *see also* '967 Patent, at 10:54-57; '849 Patent, at 10:58-61. The Filepp Patents are directed to solving that problem by relying on the processing power of the user reception systems, such as personal computers, in addition to the host system. Exhibit L at 1-3; '967 Patent, at 10:57-65; '849 Patent, at 10:61-11:2.

The Filepp Patents teach that objects, the data structures that make up applications, can be selectively stored for future use, as depicted in Exhibit I. '967 Patent, at 6:26-32; '849 Patent, at 6:28-32. In this way, reception systems can retrieve from the network only new objects that are needed, as they are needed—and create an updated display dynamically, *see* Exhibit J—instead of waiting for the host to process, modify, and send the entire display to the user, *see* Exhibit H. '967 Patent, at 11:10-16; '849 Patent, at 11:15-20. Objects thus have a uniform, self-defining format so that the user reception system can treat them as modular components to construct interactive applications. '967 Patent, at 5:52-58; '849 Patent, at 5:54-60. The '967 and '849 Patents claim:

'967 Patent Claim 1	'849 Patent Claim 1
<p>1. <i>A method for presenting interactive applications on a computer network</i>, the network including a multiplicity of user reception systems at which respective users may request a multiplicity of available applications, the respective reception systems including a monitor at which the applications requested can be presented as one or more screens of display, the method comprising the steps of:</p>	<p>1. <i>A method for presenting advertising obtained from a computer network</i>, the network including a multiplicity of user reception systems at which respective users can request <i>applications, from the network, that include interactive services</i>, the respective reception systems including a monitor in which at</p>

<p>a. <b><i>generating a screen display at a respective reception system for a requested application</i></b>, the screen display being generated by the respective reception system from data objects having a prescribed data structure, at least some of which objects may be stored at the respective reception system, <b><i>the screen display including a plurality of partitions, the partitions being constructed from objects, the objects being retrieved from the objects stored at the respective reception system, or if unavailable from the objects stored at the respective reception system, then from the network</i></b>, such that at least some of the objects may be used in more than one application;</p> <p>b. generating at least a first partition for presenting <b><i>applications</i></b>; and</p> <p>c. generating concurrently with the first partition at least <b><i>a second partition for presenting a plurality of command functions</i></b>, the command functions including at least a first group which are selectable to permit movement between applications.</p>	<p>least the visual portion of the applications can be presented as one or more screens of display, the method comprising the steps of:</p> <p>a. structuring <b><i>applications</i></b> so that they may be presented, through the network, at a first portion of one or more screens of display; and</p> <p>b. <b><i>structuring advertising in a manner compatible to that of the applications</i></b> so that it may be presented, through the network, at a second portion of one or more screens of display concurrently with applications, <b><i>wherein structuring the advertising includes configuring the advertising as objects that include advertising data and</i></b>;</p> <p>c. <b><i>selectively storing advertising objects</i></b> at a store established at the reception system.</p>
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'967 Patent, claim 1 at 39:35-61 (emphasis added); '849 Patent, claim 1 at 39:43-61 (emphasis added). Both the '967 and '849 Patents are patent eligible because they claim "Internet-centric" solutions that are specific to interactive applications. *DDR Holdings*, 773 F.3d at 1259.

Furthermore, as this Court has recognized, claims that "purport to improve the functioning of the computer itself" are patent-eligible under *Alice* Step One. *Intellectual Ventures I*, 2015 WL 1843528, at \*20 (quoting *Alice*, 134 S. Ct. at 2369). The Filipp Patents improve the functioning of the host computer by breaking applications into objects that can be more efficiently processed by the host and user reception systems working together.

Defendants cannot pinpoint an abstract idea to which the Filipp Patents are allegedly directed. Instead, they waver between several: "presenting applications and advertisements on a user's computer," D.I. 19 at 2, "local storage of information," *id.* at 21, "generating a partitioned

display,” *id.*, and “presenting a user with targeted advertising that is stored on the user’s computer.” *Id.* at 25. As was the case in *DDR Holdings*, Defendants’ “varying formulations” suggest that the patents are directed to a concrete idea. *DDR Holdings*, 773 F.3d at 1257. In fact, none of Defendants’ formulations address the concepts of **modular objects** that make up interactive applications, **selective** storage of those objects, and **as-needed** retrieval of new objects—concepts which are central to the Filepp Patents. Without modular objects, there would be no way to reduce the load on the host computer by serving only those portions of the interactive applications that are needed. Likewise, without selective storage and as-needed retrieval, a host would be forced to serve entire applications from the host computer like the inefficient prior art systems. Thus, Defendants’ characterizations of the Filepp Patents do not capture their claim language or the solutions to which they are directed.

Defendants argue that claims that “[s]imply disclos[e] storage, organization, and/or transmission” are not patent eligible. D.I. 19 at 21-22 (discussing the ’967 patent and citing *Ultramercial*, 772 F.3d at 712, 715; *Advanced Auctions, LLC v. eBay, Inc.*, No. 13CV1612 BEN (JLB), 2015 WL 1415265, at \*1, \*3-\*4 (S.D. Cal. Mar. 27, 2015); *Hewlett Packard Co. v. ServiceNow, Inc.*, Case No. 14-cv-00570-BLF, 2015 WL 1133244, at \*1-\*2, \*5 (N.D. Cal. Mar. 10, 2015)); D.I. 19 at 27, n.14 (citing the same cases with respect to the ’849 Patent). Each of the cited cases turned on the fact that the patents simply applied conventional computer processes to abstract ideas. *Ultramercial*, 772 F.3d at 712, 715 (sponsor messages); *Advanced Auctions*, 2015 WL 1415265, at \*3-\*4 (auctions); *Hewlett Packard Co.*, 2015 WL 1133244, at \*1-\*3 (customer service). But here, the Filepp Patents do not “simply disclose” conventional computer processes. Rather, they claim innovative methods that improve conventional interactive applications by structuring them as data objects that can be selectively stored,

retrieved as needed, and dynamically assembled by user reception systems into partitions. ‘967 Patent, at claim 1; ‘849 Patent, at claim 1. Defendants do not—and for the purposes of a motion to dismiss cannot—dispute that this concept was not “conventional” at the time that the inventions were conceived in the 1980s. Exhibit L, at 1-3; D.I. 1 at ¶ 17-19. Furthermore, the case law makes a clear distinction between claims that use a computer to make abstract human behavior more efficient, which does not demonstrate patentability, *Bancorp*, 687 F.3d at 1278, and claims that improve the function of the computer itself, which does. *Alice* 134 S. Ct. 2359; *Intellectual Ventures I*, 2015 WL 1843528, at \*21; *Smartflash*, 2015 WL 661174, at \*9. The patents in Defendants’ cited cases were in the former category. The Filepp Patents, in contrast, fall squarely in the latter category. *Id.*

Defendants also rely heavily on a recent Patent Trial and Appeals Board decision that relates to a patent claiming “screen displays.” D.I. 19, at 22 (citing *Bank of America v. Intellectual Ventures I, LLC*, CMB2014-00030, Paper No. 32 (P.T.A.B. Apr. 24, 2015)). The claims here are clearly distinguishable. First, the claims in *Bank of America* simply recited two displays along with *what* should be displayed: “a display depicting portions of the web site visited by the user as a function of the web site navigation data” and “a display depicting portions of the web site visited by the user as a function of the user’s personal characteristics.” *Id.* at 4. Accordingly, the Board found that the claims were directed to the abstract idea of *what* to display: “data about a particular user.” *Id.* at 9. In contrast, the claims of the Filepp Patents are directed to *how* to make interactive applications more efficient by using objects that are selectively stored, and retrieved as needed, to implement features such as command functions (claimed by the ‘967 Patent) or advertising data (claimed by the ‘849 Patent).

Furthermore, in *Bank of America*, the Board was strongly influenced by the detailed

factual record. The patent owner's own expert admitted that the patent was "abstract" precisely because—unlike the Filepp Patents—the patents at issue in *Bank of America* did not include implementation details. *Id.* at 9-10. The patent holder also did not rebut testimony from petitioner's expert that the claim elements were "well-known and standard." *Id.* 13. That testimony was about what was well-known in 1998, the priority date of the patent in *Bank of America*, *see id.* at 2 (citing U.S. Patent No. 7,603,382, attached as Exhibit M), which has no bearing on what was well-known a decade earlier, in 1988, the priority date of the Filepp Patents. *See* '967 Patent; '849 Patent. Here, the allegations in IBM's complaint, which are assumed true, and are unrebutted by Defendants, describe how the elements of the Filepp Patents, such as the selective storage and as-needed retrieval of modular objects, were a novel alternative to dumb terminals. Exhibit L, at 1-3; D.I. 1 ¶ 17-18.

#### **B. Defendants Propose No Brick And Mortar Scenario**

Defendants do not identify brick-and-mortar steps that correspond to the elements of the Filepp Patents. The fact that both sides agree that the claim limitations could not be performed by a human alone is an important indication that the claims are patent-eligible. *Helios Software*, 2014 WL 4796111, at \*17. Instead, Defendants attempt to find steps that correspond to their own superficial summary of the Filepp Patent claims by stating "humans have applied the concept of local storage" because "someone may create a copy of a document that is also stored in a file room so to avoid having to visit the file room each time she needs to use the document." D.I. 19 at 21. As an initial matter, Defendants' comparison should be rejected because it does not address key elements of the Filepp Patents that do not have a human analog, including "objects," "applications," "partitions," "portions," "command functions," and "selectively storing advertising objects." '967 Patent, at claim 1; '849 Patent, at claim 1. In fact, Defendants do not even attempt to come up with a human equivalent to the other simplified concepts they

ascribe to the Filepp Patents, such as “generating a partitioned display.” D.I. 19 at 21.

Defendants’ comparison is also artificial because the mechanics of local storage in the computer world is different than that of the physical world. As but one example, it makes sense to selectively store local copies of modular data objects that make up an application partition in the computer context because they take up less hard drive space and RAM, can be automatically reassembled to create a partition to display to the user, and may be electronically duplicated and reused to make the network more efficient. ’967 Patent, at 10:66-11:16; ’849 Patent, at 11:3-20. In contrast, it makes no sense to separately photocopy parts of a piece of paper, selectively store local copies of some but not all of them, and then reassemble them physically in response to user requests because that process would be *less* efficient than simply copying the entire page, would be time-consuming to reassemble (using, *e.g.*, Scotch® tape), and would be difficult and messy to reuse. Again, Defendants’ inability to come up with a persuasive brick and mortar scenario demonstrates that the claims of the Filepp Patents are directed to patent-eligible subject matter. *Intellectual Ventures I*, 2015 WL 1843528, at \*21.

### **C. The ’967 And ’849 Patents Claim Inventive Concepts (*Alice* Step Two)**

The claims of the Filepp Patents include inventive concepts under *Alice* Step Two, which independently precludes a finding of patent-ineligibility. At the time of conception, in the 1980s, computer networks were structured so that host systems managed applications for dumb terminals that simply displayed the content they received. Exhibit L, at 1-3; D.I. 1 ¶ 17. Defendants are correct that, even back then, interactive computer networks were not new. Exhibit L, at 1-3; D.I. 19 at 23. However, the mechanisms of structuring interactive applications that the Filepp Patents claim were groundbreaking and required inventive concepts to implement. Exhibit L, at 3-15;

The Filepp Patents disclose that application partitions are areas of the screen display

made up of objects and can operate independently. '967 Patent, at 6:3-5; 16:4-7, '849 Patent, at 6:5-7; 16:15-18. They can therefore be used to organize objects into subsections that can be displayed “concurrently” as claimed by the Filepp Patents. *See, e.g.*, '967 Patent, claim 1; '849 Patent, claim 1. In contrast, with the prior art depicted in Exhibit H, which displayed information “sequentially,” '967 Patent, at 1:40-45; '849 Patent, at 1:37-42, the claimed inventions gave users access to a more convenient display of multiple partitions, as depicted in Exhibits I and J, allowing for easier access to command menus and advertisements displayed concurrently with application content. '967 Patent, at 2:7-38; '849 Patent, at 2:20-44.

The Filepp Patents disclose that objects “have a uniform, self-defining format known to [the user reception system], and include data types, such as interpretable programs and presentation data for display at [the] monitor screen . . . of the user’s personal computer.” '967 Patent, at 5:52-55; '849 Patent, at 5:54-57. The uniform, self-defining format *known to the user reception systems* means that the host avoids proprietary data, commonly used in the prior art, and thus can offload some processing of interactive applications to the user reception systems. '967 Patent, at 10:66-11:4; '849 Patent, at 11:3-9. For example, with respect to the claim 1 of the '967 Patent, objects can make up a “partition for presenting a plurality of command functions . . . to permit movement between applications.” '967 Patent, at Fig. 3b, 39:35-61. With respect claim 1 of the '849 Patent, the objects can make up advertising portions that can be efficiently populated by the user reception systems. '849 Patent, at 9:65-10:6, 39:43-61. Both Filepp Patents teach how to take advantage of the modular nature of objects by selectively storing objects in a local store, '967 Patent, at 27:35-43; '849 Patent, at 27:47-55, and retrieving from the network only those objects that are not available locally. '967 Patent, at 27:55-59; '849 Patent, at 28:1-5.

Furthermore, the “ordered combination” of the Filepp elements is more than the sum of its parts because the object elements allow applications to be broken down into discrete elements, the partition elements organize those objects, and the selective storage and as-needed retrieval elements take advantage of the ability to request only those parts (*i.e.* sets of objects) of the applications that are necessary to reduce the strain on processing, network, and storage resources. *Alice*, 134 S. Ct. at 2355. Together the “combination of elements . . . is sufficient to ensure that the patent in practice amounts to significantly more” than any of the abstract concepts that Defendants attempt to attribute to the Filepp Patents. *Id.* (internal quotes omitted). Defendants’ assertion that ’967 Patent claim 1 “provides no details on the claimed data objects and their prescribed structure,” D.I. 19 at 24 (citing *TriPlay*, Slip Op., p 31), simply ignores both the specification and the claims.

Defendants’ focus on cases that involve “displaying an image” or “presenting advertising” ignores the inventive aspects of the Filepp Patents. *See* D.I. 19 at 23, 25 (citing *Tuxis Techs., LLC v. Amazon.com, Inc.*, C.A. No. 13-cv-1771-RGA, 2015 WL 1387815, at \*4 (D. Del. Mar. 25, 2015)); D.I. 19 at 28 (citing *Gametek LLC v. Zynga, Inc.*, No. CV-13-2546 RS, 2014 WL 1665090, at \*6–7 (N.D. Cal. Apr. 25, 2014)). The Filepp Patents claim specific “generating” or “structuring” mechanisms where visual elements are simply a byproduct of a novel way to make applications more efficient by reducing demand of the host system. Just as in the case of *Smartflash*, “the asserted claims here recite specific ways of using distinct memories, data types, and use rules that amount to significantly more than the [alleged] abstract idea.” 2015 WL 661174, at \*8. Moreover, claims directed to displaying content *can* involve inventive concepts if they improve on the prior art. For example, in *Trading Techs. Int’l, Inc. v. CQG, Inc.*, the Court found that the modification of prior displays was “an ‘inventive concept,’ which



eliminated some problems of prior [graphical user interfaces] relating to speed, accuracy and usability [and] therefore the patents-in-suit claim[ed] patent eligible subject matter.” Case No. 05-cv-4811, 2015 WL 774655, at \*5 (N.D. Ill. Feb. 24, 2015). Here too the claims improve the speed, accuracy, and usability of the interface.

Furthermore, the Filepp Patents meet at least the transformation prong of the machine-or-transformation test because they are specifically directed to transforming objects sent over the network into applications. *See Card Verification*, 2014 WL 4922524, at \*5 (finding that the transformation of electronic signals meets the machine-or-transformation test). That transformation is depicted in Exhibit J. The Filepp Patents also meet the transformation prong because they specify how interactions between the user reception systems and the host are transformed in order to achieve a result that overrode the “dumb terminal” conventions of the prior art. *See Messaging Gateway*, 2015 WL 1744343, at \*6 (finding claims focusing on novel interaction between different computer were patent-eligible).

Defendants suggest that the Filepp Patents are overbroad because they apply to all of Defendants’ webpages. As an initial matter, Defendants’ preemption concerns ignore the alternatives specifically discussed in the specification. One alternative is to transfer the entire interactive application at once to user reception systems instead of breaking it up into data objects, as depicted in Exhibit H. ’967 Patent, at 1:37-55; ’849 Patent, at 34-52. Another alternative is to require users to retrieve content from the server each time the user interacts with the application, instead of storing data objects at the user reception system. ’967 Patent, at 10:37-41; ’849 Patent, at 10:42-45. The fact that the Defendants chose, instead, to implement their websites using IBM’s patented technology, simply demonstrates the value of IBM’s intellectual property.

**D. Defendants Have Not Shown That The Claims Are Representative Nor That This Motion Can Be Decided Before Claim Construction**

Defendants have not met their burden to show that claim 1 of the '967 Patent and the '849 Patent are representative. For example, claims 12 and 13 of the '967 Patent recite:

12. The method of claim 1 further including generating at least a third screen partition concurrently with the first and second screen partitions for presenting a second application and wherein *the data structure of the objects includes a header and one or more data segments*.

13. The method of claim 12 wherein the objects are stored at the respective reception systems in accordance with a predetermined plan, and wherein the predetermined plan for storing objects at the respective reception systems includes *providing the objects with a storage control parameter in their respective headers*, and wherein presenting a third screen partition includes presenting the second application as advertising.

'967 Patent, claims 12-13, at 40:51-63 (emphasis added). Defendants argue that there is insufficient specificity about the “underlying structure of the objects.” D.I. 19 at 22. This argument fails as Claims 12 and 13 demonstrate by specifying that the data structure of the objects includes a header and one or more data segments, and that the headers can contain a storage control parameter. The storage control parameter has a direct effect on the mechanism underlying the storage and retrieval of data objects. '967 Patent, at 6:60-63, 27:35-43.

Claim construction will provide additional evidence of the inventive concepts inherent in the claim elements and will further rebut Defendants' arguments that the claimed components are not sufficiently defined. D.I. 19 at 22. For example, reasonable constructions of the terms “objects,” “applications,” “partitions,” “portion,” “command functions,” and “selectively storing advertising objects” (see potential constructions, Exhibit K), show very clearly that these claims are terms of art drawn to patent eligible, “computer centric” technology.

**CONCLUSION**

For the foregoing reasons, IBM respectfully requests that this Court deny Defendants' Motion To Dismiss.

Respectfully submitted,

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